

Course Management Plan
Combat Medic Advanced Skills Training, CMAST
Phase 2, 91W Transition Course
300-91W1/2/3/4(91WY2)(T)
Effective 12 January 2006

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Course Description

The Combat Medic Advanced Skills Training (CMAST) course was developed to provide the 91W soldier medic with an overview of the stark contrast between garrison and combat trauma care. The foundation of CMAST is the concept and principles of Tactical Combat Casualty Care (TC-3). CMAST takes the basic knowledge and skills the soldier medic attained in the Emergency Medical Technician - Basic (EMT-B) course and addresses the unique aspects of applying emergency Medical care to casualties on the battlefield. The management of the airway, chest trauma, hemorrhage, and hypovolemic shock of the battlefield casualty are all addressed. Triage and evacuation, as well as the treatment of detainees under international law are also discussed. This course contains a 25-question pre-course self-assessment written examination and culminates in several practical examinations and a 50-question written examination.

Obtaining site Certification

Prior to conducting the Combat Medic Advanced Skills Training, a US Army 91W Transition Training Site approval **MUST** first be obtained through the US Army EMS Program Management Office:

Army Medical Department Center & School
 Department of Combat Medic training
 ATTN: MCCS-AW (US Army EMS Program Manager)
 3151 WW White Rd, Bldg 1374, Rm 115
 Fort Sam Houston, Texas 78234
 COMM 210-221-5214
 DSN 471-5214 Fax 210-221-3142

Accessing Lesson Plans

With approval to conduct the Combat Medic Advanced Skills Training, the US Army EMT Program Manager will issue a specific site code, and ship course management materials to the requesting site's Course Coordinator. These materials will include course administrative and testing materials.

Class Structure

Didactic Instruction – Instructor / Student Ratio = 1:25 (minimum)

Practical Labs - Instructor / Student Ratio = 1:6 (minimum)

Practical Labs Medical Equipment – Equipment / Student Ratio = 1:6 (minimum)

Course Completion Requirements

All students should be formally counseled at time of enrollment regarding the course requirements. This counseling, DA Form 4856, should be maintained as a part of the student files.

All students enrolled must successfully complete the end-of-course examination. If a soldier fails the written examination, he/she will be counseled, receive a minimum 60 minute re-teach and be administered the written examination re-test. A second failure of the written examination will result in relief from the course without a certificate of completion. The student may enroll at a later time and attempt to complete the course successfully.

If at the end of the course any staff member feels that a student has demonstrated the level of proficiency required to competently perform a practical skill, they should notify the Course Coordinator immediately. If the student is not minimally competent, they may be relieved from the course without a course completion certificate. The student may enroll at a later time and attempt to complete the course successfully.

Attendance of all hours of instruction is mandatory.

Students should be made aware of this requirement and all other course requirements through a formal counseling during the enrollment briefing on day 1. See Appendix C.

If any student is relieved from the course for academic shortcomings, the soldier should be counseled and advised on his/her weaknesses to assist in future course attendance.

For all students relieved under academics or for any other reason, the student's command element should be formally notified.

This course will only be available at Army training sites approved through the US Army EMS Program Management office IAW policies and procedures set forth by the 91W Proponency Division, Department of Combat Medic Training (DCMT).

Course Coordinator Qualifications:

Course Coordinators must have the following qualifications:

Must be a National Registry EMT-Intermediate, National Registry EMT-Paramedic, registered nurse, licensed physician, physician assistant, or 91W who has completed BNCOC (RC BNCOC after 1 October 1996) , or be a SGT (or above) who was fully transitioned holding the 91W or 91WM6 MOS prior to 1 January 2005. Regardless of which level this individual holds, they must have completed a sponsored CMAST, Train the Trainer Course. Other qualifications will be considered on a case-by-case basis by the US Army EMS Programs Management office under the guidelines provided by the 91W Proponency Division, DCMT, AMEDD C&S.

Course Coordinator Guidance:

The Course Coordinator is responsible for ensuring training is presented as designed. Specifically, Course Coordinator (s) must--

- (1) Ensure required training resources (Appendix A) are available for presenting the training as scheduled.
- (2) Ensure instructors receive support, materials, and equipment required for presenting this training.
- (3) Ensure staff and faculty are qualified and trained to present and manage this training.
- (4) Continuously evaluate course effectiveness and efficiency and provide appropriate feedback to training/training development (task) proponent.
- (5) Ensure staff, faculty, and students comply with safety and environmental protection rules and regulations, law, and course requirements.
- (6) Ensure facilities, material, equipment, and systems required for presenting this instruction are properly maintained.
- (7) Obtain required reference material.
- (8) Ensure Instructor to Student ratios are maintained.

NOTE: Course Coordinators cannot successfully accomplish their duties if not on location at training site.

Primary & Assistant Instructor Qualifications:

Assistant Instructors presenting this training must meet the following certification requirements:

Must be a National Registry EMT-Intermediate, National Registry EMT-Paramedic, registered nurse, licensed physician, physician assistant, **or** 91W who has completed BNCOC (RC BNCOC after 1 October 1996), or be a SGT (or above) who was fully transitioned holding the 91W or 91WM6 MOS prior to 1 January 2005. Regardless of which level this individual holds, they must have completed a sponsored CMAST, Train the Trainer Course (TTT). Other qualifications will be considered on a case-by-case basis by the US Army EMS Programs Management office under the guidelines provided by the DCMT, AMEDDC&S.

Individuals in the rank of SPC or lower will be considered on a case-by-case basis depending on qualifications.

Primary Instructor / Assistant Instructor Facilitator Guidance

Instructors are directly in contact with the students and represent the command in the presentation of the instruction. They serve as the role model for the students. They must be technically competent and professional in demeanor.

Each Primary & Assistant Instructor must:

- (1) Thoroughly study and be well versed in the material prior to presenting the lessons.
- (2) Manage the training and maintain an environment conducive to student learning.
- (3) Supervise and guide the learning process.
- (4) Provide immediate feedback on student performance.
- (5) Be alert to students having difficulty and intercede as appropriate.
- (6) Ensure students comply with safety and environmental protection rules, regulations, laws, and course requirements.
- (7) Provide appropriate remedial training.
- (8) Continuously evaluate course effectiveness and efficiency and provide appropriate feedback to the training/training development (task) proponent.

Student Eligibility

The Combat Medic Advanced Skills Training course is Phase Two of the 91W Transition pathway and a part of the standard training program for Medical Pre-Deployment Training. This will not affect transition of those soldiers who have previously transitioned and have had the “Y2” identifier removed. The following are the eligibility requirements for attendance of the US Army Combat Medic Advanced Skills Training course:

- Must hold the MOS 91WY2 or 91W
- Must hold current CPR certification for Healthcare Providers which meets AHA standards.
- Must hold current unrestricted NREMT-Basic certification or have recently completed an approved EMT-B course and pending NREMT results.

Other Information

The following documents will be required to be maintained at the training site for no less than 2 years or IAW local policies which ever is greater:

1. Copies of Instructor Trainer Certificates with the TTT Course Number for each CMAST course conducted.
2. Copy of student / attendance rosters for each course conducted with a copy of the NREMT-B and CPR certifications for each student enrolled.
3. Copy of examinations used and answer sheets for all students enrolled.
4. Copy of each student's counseling for course requirements at time of enrollment.

A US Army Combat Medic Advanced Skills Training Course Summary (Appendix B) must be completed within 5 business days of course completion and forwarded to US Army EMS Program Manager.

Errors in materials, problems with instruction or other complaints or suggestions must be forwarded to the US Army EMS Program Manager for review and action. (210) 221-5214 COMM, or 471-5214 DSN. brett.humphus@amedd.army.mil

Test Administration Guidance

All CMAST examinations will be provided to all approved training sites by the US Army EMS Program Manager.

All testing will be conducted IAW TRADOC 350-70.

Required References

Program of Instruction: **300-91W1/2/3/4(91WY2)(T)**

Lesson Plans:

C191W1TC / 1
C191W2TC / 1
C191W3TC / 1
C191W4TC / 1
C191W5TC / 1
C191W6TC / 1
C191W7TC / 1
C191W8TC / 1
C191W9TC / 1
C191WTCA / 1
C191WTCL / 1

Critical Task List

081-831-0101 REQUEST MEDICAL EVACUATION C191W8TC / 1 Yes
081-831-1054 EVACUATE CASUALTIES C191W9TC / 1 Yes
081-833-0016 INSERT AN OROPHARYNGEAL AIRWAY (J TUBE) C191W3TC / 1
Yes
081-833-0047 INITIATE TREATMENT FOR HYPOVOLEMIC SHOCK C191W6TC / 1
Yes
C191W5TC / 1 Yes
081-833-0080 TRIAGE CASUALTIES ON A CONVENTIONAL BATTLEFIELD
C191W8TC / 1 Yes
081-833-0142 INSERT A NASOPHARYNGEAL AIRWAY C191W3TC / 1 Yes 081-
833-0169 INSERT A COMBITUBE C191W3TC / 1 Yes
081-833-0185 INITIATE AN INTRAOSSEOUS INFUSION C191W6TC / 1 Yes
081-833-0210 APPLY A TOURNIQUET TO CONTROL BLEEDING C191W5TC / 1
Yes
081-833-0211 APPLY A HEMOSTATIC DRESSING C191W5TC / 1 Yes

081-833-0212 APPLY AN EMERGENCY TRAUMA DRESSING C191W5TC / 1 Yes
081-833-3005 PERFORM A SURGICAL CRICOTHYROIDOTOMY C191W3TC / 1 Yes
081-835-3025 INITIATE A SALINE LOCK C191W6TC / 1 Yes

Course Map

Lesson One: Point of Wounding Care

<u>Didactic Hours</u>	<u>Lab Hours</u>
1	0

Action Text: Perform appropriate trauma assessment and emergency care for the casualty at the point of wounding

Condition: Given a casualty or casualties with significant life-threatening injuries under simulated combat conditions and an M-5 medical aid bag stocked with a basic load

Standard: Perform all measures IAW the concepts and principles of Tactical Combat Casualty Care and the Combat Medic Advanced Skills Training (CMAST) program.

Remarks: This lesson details the principles and management techniques of performing trauma casualty assessment and emergency care at the point of wounding to casualties with life-threatening injuries on the battlefield.

Reference: LP – C191W1TC / 1

Audio / Visual Reference: PowerPoint Presentation - C191W1TC CMAST - Point of Wounding Care and associated video files

Lesson 2: Tactical Combat Casualty Care

<u>Didactic Hours</u>	<u>Lab Hours</u>
3.0	0

Action Text: Provide tactical medical care for the casualty to include performing an appropriate trauma assessment and providing emergency trauma management based on the phases of care in combat

Condition: Given a casualty to be managed under simulated combat conditions and an M-5 medical aid bag stocked with a basic load

Standard: Perform all measures IAW the concepts and principles of Tactical Combat Casualty Care and the Combat Medic Advanced Skills Training (CMAST) program.

Remarks: Remarks: During this lesson, the NCO will be provided an overview of the Tactical Combat Casualty Care (TC-3) concepts of caring for casualties under battlefield conditions. The many differences between garrison casualty care and combat casualty care, as well as the phases of care under fire, tactical field care and combat casualty evacuation (CASEVAC) care will be discussed in detail. Note: This three (3) hour lesson plan (LP) is

also utilized as a stand-alone overview of Tactical Combat Casualty Care (TC-3). It contains many embedded video presentations that are incorporated in other CMAST LPs. When utilized as a stand-alone overview, it is recommended all media presentations should be opened and viewed according to the instructor cues in the LPs. When presented as part of the 30-hour CMAST course, the video media should not be utilized. All of the video associated with the TC-3 slides are presented later in the complete CMAST course, during the appropriate lecture. This technique will save considerable time and prevent needless redundancy.

Reference: LP – C191W2TC / 1

Audio / Visual Reference: PowerPoint Presentation - C191W2TC CMAST - Tactical Combat Casualty Care and associated video files

Lesson 3: Advanced Airway Techniques

Didactic Hours	Lab Hours
1.0	2.0

Action Text: Provide basic and advanced airway management to open and maintain a patent airway

Condition: Given a scenario involving a patient requiring airway management and a medical aid bag stocked with a basic load

Standard: Perform all measures IAW the concepts and principles of Tactical Combat Casualty Care and the Combat Medic Advanced Skills Training (CMAST) program.

Remarks: This lesson is designed to provide an overview of the principles and techniques of managing the airway of an unconscious casualty on the battlefield. A brief review of airway anatomy and physiology, a discussion of basic and advanced airway management, the management of airway obstruction and manual methods to establish an airway are included. During the practical exercise, the student will practice basic and advanced airway management techniques such as inserting nasopharyngeal and oropharyngeal airways, inserting a Combitube and performing an emergency surgical cricothyrotomy.

Reference: LP – C191W3TC / 1

Audio / Visual Reference: PowerPoint Presentation - C191W3TC CMAST - Advanced Airway Techniques and associated video files

Lesson 4: Chest Trauma Management

<u>Didactic Hours</u>	<u>Lab Hours</u>
1.0	1.0

Action Text: Perform appropriate trauma assessment and emergency care for the traumatic chest wall injury and provide treatment for a casualty with progressive respiratory distress

Condition: Given a casualty with a suspected chest injury under simulated combat conditions and an M-5 medical aid bag stocked with a basic load

Standard: Perform all measures IAW the concepts and principles of Tactical Combat Casualty Care and the Combat Medic Advanced Skills Training (CMAST) program.

Remarks: This lesson provides the student with an overview of the anatomy of the thoracic cavity and the physiology of respiration. The most common thoracic injuries the soldier medic may encounter such as a pneumothorax and a tension pneumothorax are addressed. General assessment principles, techniques of identifying major, immediate life-threatening thoracic injuries and the treatment of a tension pneumothorax are discussed. During the practical exercises, the student will demonstrate managing an open pneumothorax and performing a needle decompression of the chest.

Reference: LP – C191W4TC / 1

Audio / Visual Reference: PowerPoint Presentation - C191W4TC CMAST - Chest Trauma Management and associated video files

Lesson 5: Hemorrhage Control

<u>Didactic Hours</u>	<u>Lab Hours</u>
2.0	3.0

Action Text: Perform appropriate measures to control the hemorrhage and prevent hypovolemic (hemorrhagic) shock

Condition: Given a casualty or casualties with significant life-threatening injuries, under simulated combat conditions and an M-5 medical aid bag stocked with a basic load

Standard: Perform all measures IAW the concepts and principles of Tactical Combat Casualty Care and the Combat Medic Advanced Skills Training (CMAST) program.

Remarks: This lesson reviews the identification and control of significant bleeding, the clinical signs of acute hemorrhage, and the various measures that may be employed to manage hemorrhage. Direct pressure, pressure points, pressure dressings, and the use of temporary tourniquets are all addressed. During the practical exercises, the applications of tourniquets, use of the emergency trauma dressing (ETD), hemostatic agents, and improvised devices to control hemorrhage will be practiced.

Reference: LP – C191W5TC / 1

Audio / Visual Reference: PowerPoint Presentation - C191W5TC CMAST - Hemorrhage Control and associated video files

Lesson 6: Hypovolemic Shock Management

Didactic Hours	Lab Hours
1.0	3.0

Action Text: Perform appropriate measures to establish intravenous or intraosseous access and treat the casualty for hypovolemic shock

Condition: Given a casualty or casualties with significant life-threatening injuries, under simulated combat conditions and an M-5 medical aid bag stocked with a basic load

Standard: Perform all measures IAW the concepts and principles of Tactical Combat Casualty Care and the Combat Medic Advanced Skills Training (CMAST) program.

Remarks: This lesson addresses the clinical stages of hypovolemic (hemorrhagic) shock and the various measures and techniques that may be employed to manage internal and external hemorrhage. The different categories and uses of intravenous fluids, use of saline locks, techniques of sternal intraosseous (IO) infusion, and the field expedient measures that may be employed to prevent hypothermia in the battlefield casualty are discussed and demonstrated. During the practical exercises, hypotensive fluid resuscitation, the application of a saline lock and the sternal intraosseous (F.A.S.T.1) device will be practiced.

Reference: LP – C191W6TC / 1

Audio / Visual Reference: PowerPoint Presentation - C191W5TC CMAST - Hypovolemic Shock Management and associated video files

Lesson 7: Battlefield Casualty Evacuation

Didactic Hours	Lab Hours
1.0	1.0

Action Text: Package the casualty for safe evacuation using improvised litters or various commercial assault litters available on the battlefield

Condition: Given a casualty or casualties with injuries requiring evacuation under simulated combat conditions, an M-5 medical aid bag stocked with a basic load, and a variety of litters (both assault and improvised)

Standard: Perform all measures and movements IAW the concepts and principles of Tactical Combat Casualty Care and the Combat Medic Advanced Skills Training (CMAST) program.

Remarks: During this lesson, the student will review different types of assault litters available such as the SKEDCO and Talon litters. Techniques of manual carry and improvised litters are also discussed. This lesson culminates with practical exercises to validate the soldier medic's knowledge and competence in utilizing these transport devices.

Reference: LP – C191W7TC / 1

Audio / Visual Reference: PowerPoint Presentation - C191W7TC CMAST - Battlefield Casualty Evacuation and associated video files

Lesson 8: Casualty Triage

<u>Didactic Hours</u>	<u>Lab Hours</u>
2.0	

Action Text: Perform initial trauma assessments to determine the priority of the casualty and communicate the casualty's status to the next echelon of care

Condition: Given a multiple casualties with significant life-threatening injuries and a standardized medical aid bag stocked with a basic load, under simulated battlefield conditions

Standard: Performed initial assessment and triage measure IAW the concepts and principles of Tactical Combat Casualty Care and the Combat Medic Advanced Skills Training (CMAST) program.

Remarks: During this lesson, the student will discuss the principles governing priority of treatment and evacuation considerations on the conventional and integrated battlefields. The concepts of combat (battlefield) triage in all stages of care based on the likelihood of survival and the available resources, evacuation support capabilities and sorting by MEDEVAC category are discussed in this lesson and practiced during the practical exercises.

Reference: LP – C191W8TC / 1

Audio / Visual Reference: PowerPoint Presentation - C191W8TC CMAST - Casualty Triage and associated video files

Lesson 9: International Humanitarian Law and the Geneva Conventions

<u>Didactic Hours</u>	<u>Lab Hours</u>
2.0	

Action Text: Comply with the provisions of the Law of War and International Humanitarian Law

Condition: Given the information on the rights and duties set forth in the Geneva Conventions

Standard: IAW AR 190-8 and the Law of Land Warfare.

Remarks: This lesson provides an overview of customary international law and lawmaking treaties such as the Geneva and Hague Conventions that regulate land warfare. The rights and responsibilities of the soldier medic and the treatment of detainees and non-combatants during armed conflicts are stressed.

Reference: LP – C191W9TC / 1

Audio / Visual Reference: PowerPoint Presentation - C191W9TC CMAST - International Humanitarian Law and the Geneva Conventions and associated video files

Lesson 10: Combat Trauma Lanes

<u>Didactic Hours</u>	<u>Lab Hours</u>
1.0	4.0

Action Text: Perform casualty management appropriate to care under fire, tactical field care and CASEVAC care phases

Condition: Given a casualty or casualties to be assessed, managed and prepared for evacuation, under simulated combat conditions, and an M-5 medical aid bag stocked with a basic load

Standard: Perform all measures IAW the concepts and principles of Tactical Combat Casualty Care and the Combat Medic Advanced Skills Training (CMAST) program.

Remarks: These practical exercises are scenario-based, combat-oriented trauma lanes that will evaluate the student's ability to properly apply the skills and techniques presented during the CMAST course. In each scenario, the students will demonstrate the appropriate care for the casualty based on mission criticality, the specific environment and enemy activity and the anticipated time for evacuation of the casualty. Combat Trauma Lanes will utilize various terrains and situations to include managing casualties in an urbanized (MOUT) environment.

Reference: LP – C191WTCL / 1 / FM 8-10 / FM 8-10-6

Audio / Visual Reference: PowerPoint Presentation - C191WTCL CMAST - Combat Trauma Lanes

Lesson 11: Written Examination

<u>Didactic Hours</u>	<u>Lab Hours</u>
1.0	

Action Text: Complete the examination within one (1) hour

Condition: Given a written examination consisting of validated questions pertaining to the Combat Medic Advanced Skills Training (CMASST) course.

Standard: Score a minimum of 70% out of 100% to achieve a passing score.

Remarks: This one hour written examination is designed to evaluate the student's understanding of the CMAST course materials presented. The examination consists of validated, multiple-choice questions designed to identify any areas that may require extra emphasis or greater study. Students must score at least a 70% to successfully pass the examination.

Reference: LP – C191WTCA / 1

Audio / Visual Reference: NONE

CMASST - Practical Exercises

DCMT10003 Insert an Oropharyngeal Airway (OPA)	PE-1
DCMT10004 Insert a Nasopharyngeal Airway (NPA)	PE-5
DCMT10009 Insert a Combitube	PE-9
DCMT10010 Perform an Emergency Surgical Cricothyrotomy	PE-15
DCMT10024 Manage an Open Pneumothorax	PE-19
DCMT10015 Decompress the Chest: Needle Decompression	PE-23
DCMT10025 Control Bleeding using an Emergency Trauma Dressing (ETD)	PE-27
DCMT10026 Control Bleeding using an Improvised Tourniquet	PE-31
DCMT10027 Control Bleeding using a Combat Application Tourniquet (C-A-T)	PE-35
DCMT10028 Control Bleeding using a HemCon Chitosan Bandage	PE-39
DCMT10029 Control Bleeding using QuickClot Hemostatic Powder	PE-43

DCMT10019 Initiate an Intravenous Infusion	PE-47
DCMT10030 Initiate a Saline Lock	PE-53
DCMT10031 Initiate an Intraosseous Infusion (F.A.S.T.1)	PE-59
DCMT10033 Hypotensive Resuscitation	PE-63
DCMT10032 Package a Casualty for Transport	PE-69
DCMY10034 Perform Casualty Triage	PE-73

Reference: CMAST - Student Reference Book – all Lesson Plans are applicable

Appendix A: Equipment Requirements

Course Equipment List by Category: (This list is deemed as “must have” to conduct training. A complete equipment/supply list is provided in the Course POI including all expendable Class VIII is available).

Combat Medic Advanced Skills Training

1. Airway

- a. NPAs
- b. Combitube
- c. Airway manikin (NPA, Combitube, Surgical Cric application)
- d. Surgical Cric Kit

2. Bleeding

- a. Tourniquets (C-A-T)
- b. Emergency trauma dressing
- c. Cravats
- d. Sticks or some type of windlass
- e. Casualty blanket (Hypothermia)

3. Chest Trauma

- a. Asherman chest seal, petroleum gauze, battle dressings
- b. 14 gauge needle/catheter unit
- c. Chest manikin

4. Evacuation

- a. Sked, Talon litters

5. Fluid Resuscitation:

IV / Saline lock

- a. 18 gauge needle/catheter units
- b. saline locks
- c. tegoderm dressing
- d. Infusion sets
- e. Ringers lactate or NS
- f. Alcohol pads
- g. Constricting bands (Raptor)vs penrose drains
- h. 2x2 gauze
- i. Tape 3 in
- j. FAST 1 trainer

Appendix B

US Army CMAST Course Summary
US Army Medical Department Center and School
ATTN: US Army EMS Program Manager (MCCSAW)
3151 W.W. White Road, Bldg 1375, Rm 118-E
Fort Sam Houston, Texas 78234

COURSE DATES: From: _____ to _____ CMAST Site # _____ US Army Course # _____

ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

COURSE COORDINATOR: _____ DSN: _____ COMM: _____

[illegible]

This form shall be completed and forwarded to the US Army EMS Program Manager within 5 days of receiving NREMT-B Exam results for all NREMT-B Bridge Training Courses.